

AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Currently amended) A method for rapid production of synchronized progeny providing a plurality of mouse colony management services to customers, comprising:

receiving an order from a customer that indicates the service desired;

providing the plurality of services to the customer by utilizing a core process and optionally, a service-specific process for, whereby the core process is shared by the plurality of services, wherein the plurality of mouse colony management services is selected from rapid expansion of a mouse colony and rapid production of synchronized progeny, and wherein the length of time needed to produce the desired number of progeny is reduced by more than half when compared to conventional mating, wherein the core process is producing embryos by assisted reproductive technology using in vitro fertilization and comprises:

(a) superovulating a donor female mouse;

(b) obtaining oocytes from the superovulating donor female mouse;

(c) obtaining sperm from a donor male mouse having a desired trait;

(d) fertilizing in vitro oocytes obtained in (b) with sperm obtained in (c), thereby producing fertilized oocytes; and

(e) culturing fertilized oocytes produced in (d) in culture media under conditions appropriate for development of fertilized oocytes into embryos, whereby embryos are produced.

2-4. (Cancelled)

5. (Currently amended) The method of claim [[3]] 1, wherein the donor male having a desired trait or the donor female mouse having a desired trait is provided by a customer or a third party.

6. (Currently amended) The method of claim [[3]] 1, wherein both the donor male mouse and the donor female mouse are provided by a customer or a third party.

7. (Currently amended) The method of any one of claims [[3,]] 5-6, wherein the donor female mouse has a pre-determined genetic background.
8. (Cancelled)
9. (Currently amended) The method of claim [[8]] 7, wherein pricing of the rapid production of synchronized progeny ~~plurality of mouse colony management services~~ is based on the genetic background of the donor female mouse.
10. (Withdrawn) The method of claim 9, wherein the mouse colony management service is rapid expansion of a mouse colony, and the service-specific process comprises:
 - transferring an appropriate number of embryos produced by the core process into an appropriate number of pseudopregnant female mice;
 - shipping the resulting pregnant mice to customers.
11. (Currently amended) The method of claim 9, wherein the ~~mouse colony management service is rapid expansion of a mouse colony, and the~~ service-specific process comprises:
 - (a) transferring appropriate number of embryos produced by the core process into an appropriate number of pseudopregnant female mice, thereby producing pregnant mice;
 - (b) maintaining the resulting pregnant mice under conditions suitable for production of live progeny, thereby producing live progeny; and
 - (c) shipping the live progeny to a customer.
- 12-15. (Cancelled)
16. (Withdrawn) The method of claim 9, wherein the mouse colony management service is rapid production of desired number of synchronized progeny, and the service-specific process comprises:

simultaneously transferring an appropriate number of embryos produced by the core process into appropriate number of pseudopregnant female mice; maintaining the resulting pregnant mice under conditions suitable for production of live progeny, thereby producing an appropriate number of live progeny; and shipping live progeny to the customer.

17. (Withdrawn) The method of claim 9, wherein the mouse colony management service is rapid production of congenic strains with desired genetic trait(s), and the service-specific process comprises:

implanting embryos produced by the core process into at least one pseudopregnant recipient mouse;
maintaining the resulting pregnant mice under conditions suitable for production of live progeny;
among live progeny produced, selecting progeny with both the desired allele of interest and the highest percentage of target background; and
repeating the core process and the service-specific process as necessary to produce a congenic mouse with the allele of interest in a desired target background.

18. (Withdrawn) The method of claim 9, wherein the mouse colony management service is rapid production of congenic strains with desired phenotype(s), and the service-specific process comprises:

implanting embryos produced by the core process into at least one pseudopregnant recipient mouse;
maintaining the resulting pregnant mice under conditions suitable for production of live progeny;
among live progeny produced, selecting progeny with both the desired phenotype and the highest percentage of target background; and
repeating the core process and the service-specific process as necessary to produce a congenic mouse with desired phenotype(s) in a desired target background.

19-26. (Cancelled)

27. (Currently amended) A system for mouse colony management providing a plurality of mouse colony management services to customers, said system comprising at least three of the following modules:

- a customer service module;
- a scheduling and data management module;
- a live animal module;
- a surgery and in vitro fertilization module;
- a cryopreservation module;
- a packing and shipping module; and
- an education and training module.

wherein the plurality of mouse colony management system utilizes services are provided to customers by utilizing a combination of at least three of these modules, wherein the plurality of mouse colony management services and is selected from rapid expansion of a mouse colony and rapid production of synchronized progeny and wherein the length of time needed to produce the desired number of progeny is reduced by more than half.

28. (Original) The system of claim 27 wherein the system is computer implemented.

29. (Original) The system of claim 28 wherein the live animal module comprises:

- a barrier space for incoming animals;
- superovulated females;
- pseudopregnant females; and
- a barrier space for breeding and shipping.

30. (Withdrawn) A kit for distributing cryopreserved embryos, comprising:

- at least one cryopreserved embryo;
- a washing reagent for washing the cryoprotective solution off the embryo; and
- instructions for recovery of the cryopreserved embryo.

31. (Withdrawn) The kit of claim 30, wherein the kit further comprises a cryopreserved test embryo.

32. (Withdrawn) The kit of claim 31, wherein the instructions for recovery of the cryopreserved embryo is included in the kit in a manner such that the instructions must be removed to provide access to the embryo.